Abstract
This paper proposes to explore the extent to which Romania meets the convergence criteria in adopting the euro and how the economic crisis and the fiscal consolidation measures affected Romania’s efforts to adopt the single currency. This paper attempts an analysis of what it means or should the convergence criteria mean, and the current situation of Romania in adopting the euro currency. The methodology analysis the information provided by various national and international financial institutions, comparing them to reference values, analysing the efforts and results of previous years. Romania does not fulfill all convergence criteria.

Key words: euro currency, convergence criteria, Eurozone, economic consolidation

JEL classification: F15, F33, E52

1. Introduction
The topic chosen for analysis is of great importance, given the fact that accession to the Eurozone countries is very important. Also this decision must be taken at the appropriate time, if that country is not fully prepared this would have negative consequences for the stability of that country and the Eurozone.
The financial crisis combined with political instability and inappropriate application of measures to overcome the crisis makes more difficult the
transition to euro. Fiscal policies implemented by the Romanian Government since 2015 will drive away the achievement of the proposed indicators.

This paper is structured as follows: the first chapter shows the importance of joining the euro area and how EU countries were affected by the economic crisis, followed by descriptions of the convergence program; in the second section we analysed Romania in terms of fulfilment of the convergence criteria; the last section presents conclusions and proposals for near future.

2. Literature review

The topic of the nominal convergence largely debated (Balassa and Samuelson 1964) is the impossibility of simultaneous achievement by countries that start the integration in the EMU of the following two conditions: the stability of the exchange rate and the stability of inflation. In the hypothesis formulated by Balassa and Samuelson (1964), they were referring to the effects of trade relations between emerging countries and developed ones. In their scientific approaches, they started from the classification of economic sectors in two major sectors: tradable and non-tradable export, implying for emerging countries a faster growth of productivity in the tradable sectors than in the non-tradable sectors. They demonstrated that, in this case, it will inevitably produce not only a high rate of inflation, caused and induced in economy by the non-tradable goods (services), but also an appreciation of the real exchange rate in those countries, enhanced by productivity growth in the tradable goods sector.

Aurel Iancu (2003) believes that including countries earlier in the Eurozone would avoid costs leading to eliminate the risks and costs fluctuation in exchange rates, the elimination costs of exchange rate, more transparent use of the prices and macroeconomic lowering inflation and interest rates. This would possibly be achieved at the very moment of entering the Eurozone.

Cristina Maria Triandafil (2013) noticed a series of contradictions between the convergence criteria carrying a 10-year study of their development in Europe. It concluded that a rigorous controlled inflation often implies an increase of interest rates and an appreciating exchange rate, which can lead to an infringement of the nominal convergence criteria. Her study highlighted the restrictive nature of nominal convergence criteria through the
The dynamics of the corresponding indicator EU15 and the New Member States during 2000-2010.

Busetti (2007) highlighted that the establishment of a reference inflation rate by reporting to the best three countries in the field can lead to a situation where a country can be included among those best performing countries but it's always possible to not fulfill the convergence criteria.

Staehr (2007) when comparing the cyclical properties of fiscal policies applied in Europe found out that the main difference in fiscal policy reaction in the Eurozone and European Union countries stems from the revenue intake. The Eurozone countries have pursued pro-cyclical revenue policies, while the European Union countries have raised revenue in a countercyclical or a-cyclical fashion.

3. The convergence criteria and the Eurozone crisis

The Economic and Monetary Union (EMU) is an important step in the integration process of the economies of the European Union.

The advantages of adopting the euro are:

- a diversified offer and stable prices for consumers and citizens;
- higher security and more opportunities for businesses and markets;
- stability and growth;
- integrated financial markets;
- a stronger EU presence in the global economy;
- presence of a strong European identity.

The euro, the single currency of the monetary union created for member states of the European Union (EU), was established by the provisions of the 1992 Maastricht Treaty (formally the Treaty on European Union, signed in Maastricht, Netherlands). The Treaty provided the legal foundation for the creation of the single European currency, later named the euro. To enter into the monetary union, member states were required to adhere to “convergence” criteria, including rules on budget deficit levels, debt levels, low inflation, and interest rates close to the EU average (Ngai, 2012).

Hagen and Wolff (2004) after testing the hypothesis that governments try to circumvent fiscal rules by means of creative accounting found out that the introduction of the stability and growth pact and the excessive deficit procedure in Europe have resulted in creative accounting. Way back in 2004 their results confirmed the vulnerability of fiscal rules due to creative accounting.
Adopting the euro is conditioned upon meeting the convergence criteria in a sustainable manner. The convergence criteria can be defined as an economic test in order to assess the economy's preparedness to participate in Stage Three of EMU. These criteria were established by the Maastricht Treaty, ratified by all EU member states in 1993, and covers:

- **Price stability**: the average inflation rate over the last 12 months must be sustainable and shall not exceed with more than 1.5 percentage points the reference value (the reference value is the unweighted arithmetic average of the inflation rates in 3 EU member states with the lowest inflation rate).

- **Public finances**: the budget deficit ratio must not exceed 3% of GDP and the debt must not exceed 60% of the country's GDP.

- **Interest rates**: long-term interest rate must not exceed with more than two percentage points the interest rate of the three member states of the euro area recorded the.

- **Exchange rate stability**: exchange rates must be maintained between the fluctuations of the exchange rate mechanism (ERM II) for a period of at least two years without severe tensions.

The European Union member states that meet the convergence criteria may join the Eurozone and there is no predetermined limit regarding the number of countries that can be integrated in this group of countries.

These convergence criteria are designed to ensure the best economic conditions when joining the Eurozone. Each country must be responsible when implementing fiscal policies, their economic situation must be similar enough to ensure a single monetary policy. The fiscal consolidation measures applied by the Eurozone member states in the last years are helping the countries to meet the convergence criteria.

European Union countries have experienced in last years an alarming economic decline. The financial crisis and fiscal policies applied in Europe for decades played a determining role in increasing public debt. The financial crisis contributed to the explosion of budget deficits and the dramatic rise of public debt. The financial crisis has played an important role in increasing public debt, but this increase of the public debt it’s not a new issue.

The inappropriate implementation of fiscal measures to overcome the crisis, measures implemented due to lack of permissive fiscal space did not lead to a quick economic recovery. In the case of most EU countries the fiscal policies implemented before the economic crisis were wrong at the time. Most
countries instead of implementing countercyclical measures applied pro-
cyclical measures.

4. Recent and planned budgetary developments

Although the implemented measures to stimulate Romania’s economy in 2015 and the measures applicable from 1 January 2016 (the new Fiscal Code) drives Romania away from reaching the criteria for adoption of the euro, the commitment to adopt the euro currency in 2019 is maintained through the Program of Convergence 2015-2018.

Budgetary policy objective was the adjustment of the budget deficit. Budget deficit targets were planned at 2.2% of GDP in 2013, 1.2% in 2014 and 0.9% in 2015. These targets were achieved only in 2013, the budgetary deficit in 2015 is approximately 1.2% of GDP.

For 2016, the EU executive forecasts a strong deterioration in the budget deficit, towards 3.5% of GDP, due to the impact of tax cuts prepared by the Government. Also in the European Commission report of 2015 for Romania, it is noted that public finances were stable in 2015, but a deterioration is expected due to increasing costs and reducing VAT and other taxes. EU executive expects the public debt to grow in the future over 40% of GDP.

However, the 2015-2018 Convergence Programme refers to the fact that Romania has made considerable progress in recent years in reducing macroeconomic imbalances and restoring fiscal and financial space for manoeuvre, which together with monetary policies and structural reforms being implemented helped maintaining macroeconomic and financial stability.

The convergence program expects private consumption and investments to grow starting with 2016, these resulting an increases of the GDP growth potential. Although Romania's economic growth is quite high compared to the economic growth of other EU countries it is based on a consumption stimulated by growth in imports rather than a stimulate supply. This will influence the financial stability and macroeconomic balance.

The 2015-2018 Convergence Programme approximates the average inflation in 2016 at 1%. This approximation is based on the reduced VAT for food by 15 percentage points from June 2015, but also on the reduction of the standard VAT rate from 24% to 20% from 1 January 2016.

5. Fulfilling the convergence criteria in the current economic context
To evaluate the Romanian economy efficiency towards euro currency adoption this chapter will analyse the stage of the Maastricht criteria correspondence, prerequisite to enter the Exchange Rate Mechanism (ERM 2).

**Compliance with the price stability criterion:** the average inflation rate over the last 12 months must be sustainable and shall not exceed with more than 1.5 percentage points the reference value (the reference value is the unweighted arithmetic average of the inflation rates in 3 EU member states with the lowest inflation rate).

**Figure 1: Inflation in the Eurozone and Romania during 2010-2015**

During 2010-2013 we can see large inflation level fluctuations in Romania, but in 2014 the anti-inflationary policies lead to its stabilization.

In the reference period May 2013-April 2014, average annual HICP inflation in Romania was 2.1%. The reference value for the criterion on price stability in the reference period was lower, 1.7%. In the reference period Romania does not meet this convergence criterion.

Retrospective analysis over a longer period shows that, in Romania, inflation measured by annual consumer prices decreased from very high levels in the early 2000s until 2007, when the downward trend was reversed. In 2009, inflation decreased again and later stabilized, generally around 6%. In addition to unit labour costs, various supply-side shocks, adjustments in
administered prices as well as exchange rate movements had a major role in the evolution of inflation.

The analysis shows that inflation developments generally followed a downward trend from a peak of 8.5% in May 2011, to -0.6% to the end of 2015. This significant decrease results illustrate the VAT decrease rate to 20% from 24%. We believe that the situation of deflation from 2015 is not an alarm reason because it is a result of VAT decreased, not a result of decreasing prices by the manufacturers.

The high difference of the inflation rate between Romania and the Eurozone in 2011-2013 is due to measures taken by the Romanian Government to strengthen the budgetary deficit. Because a fiscal space for manoeuvre was non-existent there were taken a series of measures that decreased short term consumption, but strengthened long-term fiscal consolidation and led to lower budgetary deficit.

**Compliance with the public finances criterion:** for the Economic and Monetary Union (EMU) to function smoothly, member states must avoid excessive budgetary deficits. The state budget deficit (actual budget or planned) must not exceed 3 percent of the GDP. If the reference value is exceeded, the budget deficit must be reduced substantially and continuously to a value close to the reference or exceeding the reference value must be exceptional and temporary. Public debt should not exceed 60 percent of GDP, and if higher values are recorded the government debt must be reduce significantly approaching the reference value at a satisfactory pace.

**Budgetary deficit**

The state budget is a reflection of the country’s economic situation, therefore the creation, adoption and enforcement of it are found not only in the sphere of interest of executive and legislative power, but also in the sphere of interest of economic actors and population. A budgetary deficit occurs when expenditures exceed the revenues of the entity.

As everywhere in the world, in Romania the financial needs of the state turn out to be permanent. These are covered by incomes received by the state under the right conferred by the Constitution to receive taxes, fees and other contributions. Taxes are received according to population’s ability to pay, and the fees are collected according to the equivalence principle. State revenues and opportunities to obtain them are almost never large enough to cover all its expenses during the considered period (usually a year). This resources insufficiency leads to the emergence of budget deficits.
Figure 2: Budgetary deficits in Romania and Eurozone during 2010-2015

In the analysed period the evolution of budgetary deficit in Romania had followed the dynamics of Eurozone, decreasing from 2010 to the end of 2013, then gradually increased until the end of 2014. Thus, the Eurozone's budgetary deficit in 2014 was 2.6% of GDP, after in 2009 nearly tripled from the previous year (6.9% versus 2.4 percent of GDP). In 2010, the indicator was 6.5% of GDP. Romania currently is the subject to an EU Council decision on the existence of an excessive deficit. In 2014, Romania recorded a deficit budget of 1.4% of GDP reference value lower than 3%. The budgetary deficit for 2015 is estimated at 1.2% of GDP according to ESA methodology.

Romania is expected to exceed the deficit reference value of 3% of GDP in 2016. For 2016, a deficit of 3.5% of GDP is forecast, which is estimated to correspond to a structural deficit of 3.4% of GDP. The Convergence Programme plans a deficit of 1.2% of GDP (Assessment of the 2015 Convergence Programme for Romania). In the Assessment of the 2015 Convergence Programme for Romania Report it is highlighted numerous times that the Convergence Programme does not include the new changes in the Fiscal code.

The main challenge of fiscal policy in Romania during the past years has been reducing the structural budget deficit while creating fiscal space for public expenditure investment (particularly for infrastructure). The structural problems were blocking factors for economic growth and the aim was
ensuring long-term sustainability of public finances in the light of the inevitable process of population aging.

Public debt

All these financing budget deficits have led to the emergence of government debt.

The phenomenon of debt increasing is, on the one hand, linked to a decrease in revenues of the state budget and tax incentives for companies and individuals. All the world governments of any political color implemented this guidance. These promoted measures at European level to stimulate labour supply and improve the competitiveness of companies have not only led to a considerable increase in social inequalities, but exhausted public finances too. Greek and Irish examples are good lessons be followed. They show that the debt crisis hitting Europe is a legacy of fiscal and monetary policies carried for decades in Europe. The debt ratio of a country is expressed in percentage size, the ratio of public debt balance and gross domestic product.

Figure 3: Debt ratio of Romania and Eurozone during 2010-2016

(Source: Eurostat)

In the chart above we can see a similar trend of changes of Romania’s government debt compared with that of countries in the euro area, of course the debt of euro area countries is higher.

Analysis of government debt ratio of a country should not be done only strictly mathematical, but should be correlated with both the level of
public debt per capita and with the average gross domestic product per capita, because the same percentage of debt to GDP ratio can be supported better by developed economies than emerging ones. In 2014 the GDP per capita in Romania was 7,500 euros compared to 27,000 euros per capita GDP in the European Union.

At the end of December 2012, the value of government debt was 227.2 billion RON, representing 38.7% of GDP. As of 2000, this percentage decreased to the minimum level of 17.1% of GDP in 2006, as a result of strong economic growth, reduced budget deficits and interest payments of relatively low value, together with the use of income from work privatization. The declining trend was reversed in 2008, due to the international financial crisis in late 2008 and the sovereign debt crisis in the Eurozone countries.

Government debt according to EU methodology at the end of 2015 was 39.2% of GDP, well below the 60% limit set by the Maastricht Treaty. Romania's public debt is about 62.14 billion euros.

**Compliance with the interest rates criterion**: long-term interest rate must not exceed with more than two percentage points the rate of the three best performing Member States in terms of price stability.

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**Figure 4: The interest rate in Romania and Eurozone during 2015-2016**

(Source: Eurostat)

According to the Convergence Report from June 2014 in the reference period May 2013 - April 2014 long-term interest rates were, on average, 5.3%.
Long-term interest rates were lower than the reference value of 6.2% for the interest rate criterion.

In the previous years, long-term interest rates in Romania have tended to fluctuate around 7%, with a margin of ± 0.5 percentage points. The persistent inflation has not allowed the placement of nominal interest on a sustained downward trend.

European Central Bank in the Convergence Report from June 2014 reported that inflation has declined substantially, prompting the Central Bank to relax monetary policy rates faster than in previous periods. This has helped reducing long-term interest rate in Romania. At the end of the reference period, long-term interest rates were placed at 5.2%, 2.8 percentage points above the corresponding euro area average (and 3.5 percentage points above the Eurozone sovereign bond yield rated AAA).

**Compliance with the exchange rate stability criterion:** exchange rates must be maintained between the fluctuations of the exchange rate mechanism (ERM II) for a period of at least two years without severe tensions (±15%).

Interest rate and exchange rate are two variables that are associated with the cost of borrowing capital, respectively, the degree of an economy development compared with other countries.

**Figure 5: Evolution of the EUR/RON currency during 01.01.2015-01.01.2016**
According to the Convergence Report from June 2014, in the two-year reference period, the Romanian RON did not participate in ERM II but traded under a flexible exchange rate regime to a controlled fluctuation. Romanian RON exchange rate against the euro was characterized by a relatively high degree of volatility.

After a mild appreciation in May 2013, the Romanian RON recorded a depreciation in mid-2013, a period characterized by high volatility. Subsequently, the Romanian RON was again appreciated to some extent stabilizing close to the average level recorded at the beginning of the reference period.

### 6. Conclusions

Table 1 Convergence criteria

<table>
<thead>
<tr>
<th>Assessment year</th>
<th>Values</th>
<th>HICP inflation rate</th>
<th>Public finances</th>
<th>Interest rate</th>
<th>Exchange rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Budgetary deficit</td>
<td>Debt to GDP ratio</td>
<td>ERM II Member</td>
</tr>
<tr>
<td>2012</td>
<td>Reference values</td>
<td>3.1%</td>
<td>Max. 60%</td>
<td>Max. 3.0%</td>
<td>Min. 2 years</td>
</tr>
<tr>
<td>Romania</td>
<td>4.6%</td>
<td>37.4%</td>
<td>3.2%</td>
<td>7.25%</td>
<td>No</td>
</tr>
<tr>
<td>2013</td>
<td>Reference values</td>
<td>2.7%</td>
<td>Max. 60%</td>
<td>Max. 3.0%</td>
<td>Min. 2 years</td>
</tr>
<tr>
<td>Romania</td>
<td>4.1%</td>
<td>38%</td>
<td>2.2%</td>
<td>6.36%</td>
<td>No</td>
</tr>
<tr>
<td>2014</td>
<td>Reference values</td>
<td>1.7%</td>
<td>Max. 60%</td>
<td>Max. 3.0%</td>
<td>Min. 2 years</td>
</tr>
<tr>
<td>Romania</td>
<td>2.1%</td>
<td>39.90%</td>
<td>1.4%</td>
<td>5.3%</td>
<td>No</td>
</tr>
</tbody>
</table>


The financial crisis and the economy consolidation mechanisms have slowed down Romania's possibilities joining the Eurozone. For this reason, Romania remains without a credible target for adopting the euro currency.

In the Assessment of the 2015 Convergence Programme for Romania Report it is noted that stability and predictability are crucial for a country's economy and a well-functioning fiscal policy.

On March 25, 2011 Romania adopted the Euro Plus Pact, which is intended to strengthen the economic pillar of the Monetary Union. This creates stronger rules, more authoritative fiscal policy, doubled by reinforced sanctions or consolidated mechanisms to ensure compliance. At the same
time, this framework will monitor competitiveness and ensure that necessary measures were taken to control economic fluctuation.

Euro Plus Pact objectives are aimed towards four areas: competitiveness, labour, public sector finances and financial stability. According to the EPP, each country is responsible for implementing the agreed objectives, this being monitored through a set of economic indicators. In terms of legislation, the proposed measures can be considered a step forward into improving the functioning of the Eurozone.

The largest eastern EU members, Poland and Hungary, have slowed their preparations for joining the Eurozone. Hungary warned repeatedly that euro adoption should be avoided for the next two decades in order to strengthen its own economy model. Bulgaria has frozen indefinitely euro adoption plans.

Before the adoption of the euro, candidate countries have to go through an interim period of at least two years, called exchange mechanism (ERM II), in this interval the stability of national currency is tested.

The latest information provided by the Romanian Government suggests 2019 as a realistic target for joining the Eurozone. According to this study conclusions are that Romania does not yet fulfill all the criteria for adopting the euro currency. We agree that the adoption of euro should be carried out on an appropriate economic situation because it needs a healthy and sustainable economic growth and a high degree of confidence in the country’s economic situation that desire to join the Eurozone.

We are firmly convinced that adopting the euro can bring the following benefits:

- Elimination of currency risk influence with a positive effect on the sustainable economic growth;
- Mandatory structural reforms;
- Requirement of a true correlation of monetary and fiscal policies;
- Elimination of international financial institutions speculative pressures on the RON;
- A positive factor for both exporters and domestic producers.

7. References


• Law no. 227/2015 of the Fiscal Code, Romanian Official Gazette No. 688 from 10.09.2015.


